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Our PUBLIC LANDS

APRIL 1952
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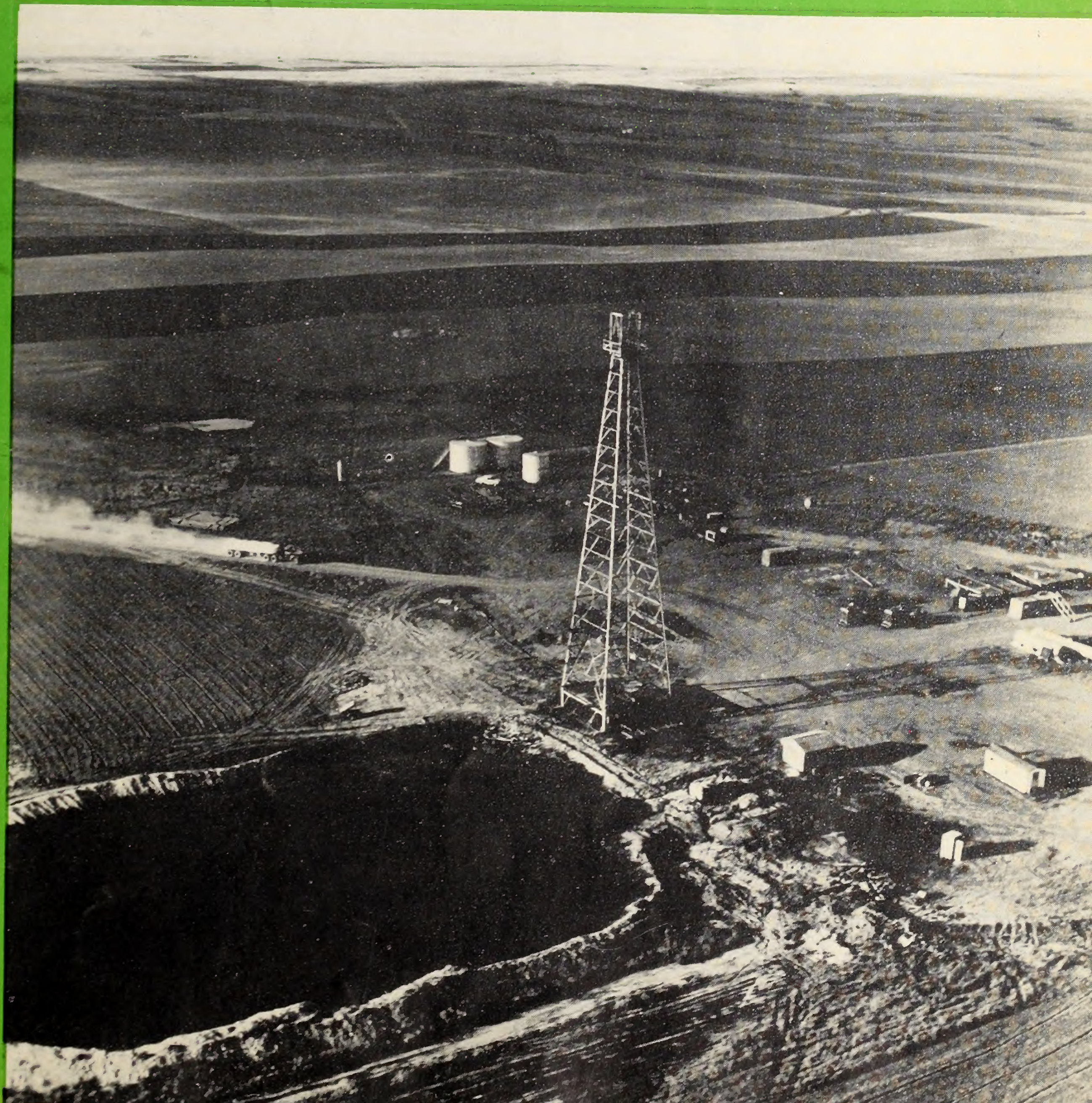

APRIL 1952 • Volume 2, Number 2

OUR PUBLIC LANDS . . .

500 million acres of land that belong to us and to our neighbors and to all the people of the United States . . . public lands that are rich in natural resources . . . timber, rangeland, water, minerals, and land for every use . . . "active acres" that must be carefully and wisely managed for the welfare of the Nation . . .

As a forum for the exchange of ideas and information on the development, utilization, and conservation of the resources on public lands, this periodical contains no copyrighted material. If pictures or material are reprinted, a credit line should be given OUR PUBLIC LANDS *and the Bureau of Land Management.*

CARLOS WHITING, *Editor.*

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COVER

The first commercial well in Williston Basin, North Dakota, was Amerada Petroleum Corporation's Iverson No. 1. Representing 29 years of search by the oil industry, the well has opened a whole new field of oil activity. The cover photograph is from the Oil Industry Information Committee.

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CORNERSTONES TO PROSPERITY

by **DONALD B. CLEMENT**, *Chief,* Eastern Survey Unit, Cadastral Engineering

When the BLM engineer is hunting for a lost corner, or establishing a new corner on the public lands, he is doing a job that is basic to all of our land management program. He is building the foundation on which rests title to homestead lands, small tracts, and other lands that are to pass into private ownership.

That foundation on public lands is also necessary before the timber can be harvested, oil and gas and other minerals developed, the grazing lands administered, or the wildlife and recreational uses managed in the best interest of all the people. Under the law, public lands must be surveyed and the corners on the boundaries of those lands established before many of the management phases can be undertaken.

These cadastral surveys, as they are called, have been in progress since the founding of this country but despite that fact and the importance of those surveys, approximately 115 million acres, or three-quarters of the public lands under BLM jurisdiction in the 11 Western States, are still unsurveyed.

The Federal Government is losing money in the form of income from timber and mineral resources because of the lack of adequate surveys; the States also are losing money for the same reason because the school sections must be surveyed before title to those granted lands is vested in the States. The lands cannot start earning money for the schools until the title is complete.

In Alaska, where less than 1 percent of the total area of the Territory has been surveyed, homesteaders, businessmen, and others are delayed in securing patents to public lands. Without the survey, public lands cannot be transferred into private ownership for those who are settling and developing the frontier areas in Alaska.

This job of cadastral surveys is not just a case of making new surveys to mark the corners to prosperity. It involves the problem of rehabilitating old surveys, many of which were made nearly 100 years ago. The corners of those old surveys are worn out in withstanding the destructive elements; wooden stakes have rotted in the ground; old stones have become covered with moss and hidden from view; marks on bearing trees have become overgrown and obscured from sight, except to the trained eye of the cadastral engineer.

It is estimated that some 53 million acres of public lands in the 11 Western States are in urgent need of resurvey in order that the corners and boundaries of the public lands may be adequately marked and identified for use in the management of those areas. These areas contain very large and valuable stands of timber.

The cadastral survey not only creates boundaries on the public lands but it also furnishes legal descriptions and areas for the subdivision of those lands, which is an important aspect in clearing and recording land titles and keeping those titles straight.

The usefulness of the cadastral engineering work of the BLM is not confined to the program of this Bureau alone but it is used widely by other Federal agencies throughout the area of the Western States. Those surveys are used for control in large mapping projects, for the mapping agencies have come to realize the inherent value of the closely spaced net-work of public land corners.

Although these cadastral surveys are mostly needed in the West and Alaska, it should be realized that there are considerable areas of public lands remaining in Alabama, Arkansas, Florida, Michigan, Minnesota, and Wisconsin. Resurveys are needed to identify those lands which were among the earliest surveyed in the United States. Island surveys and lands omitted from the original survey in these States must be identified and marked with monuments to enhance the prosperity of these areas.

Another thing that should be remembered is that these corners, once established, remain fixed for all time . . . even though the monument may become lost. Therefore, that rotted wooden marker found under a fence-line in Ohio, or that half-buried stone with barely discernible marks which may be stumbled upon in crossing the prairies of Montana, or that small capped pipe which may raise its head above the ground on some western homestead should be treated with respect. It is probably a corner marking the boundary of a piece of valuable real estate—a cornerstone to prosperity.

SPEEDING UP MINERAL DEVELOPMENT

by **LEWIS E. HOFFMAN**, *Chief,* Division of Minerals

With the establishment of the Division of Minerals of the Bureau of Land Management November 12, 1951, the Department of the Interior undertook to facilitate the development and leasing of minerals on federally owned lands in the interest of strengthening the economy of the Nation and in building up our military defenses.

Major duties of the Division include the development of programs and procedures for the leasing of federally owned or controlled minerals which are subject to lease, permit, or other method of disposal under appropriate legislation or delegated authority. The Division is also concerned with the study of policies of mineral development in keeping with sound, economic, and conservation principles.

Out of the income of over $49,000,000 received by the Bureau of Land Management for fiscal year 1951, approximately $38,500,000 was obtained by mineral leasing and disposal. Approximately $35,000,000 of this latter figure was derived from rentals and royalties on oil and gas leases. Nearly $6 is received in revenue for each dollar appropriated for BLM—with the greater portion of revenue coming from mineral activities.

Oil and gas are strategic minerals urgently needed for defense as well as for our peace economy, and the effort made by the Division of Minerals in constantly discovering new sources of supply of these vital minerals by encouraging prospecting has been reflected in the discovery during the past year of many new oil and gas fields.

During the next few days, considerable attention will be paid to the vast area of public domain lands in the States of Colorado, Utah, and Wyoming containing oil shale, which, as a result of experimentation by the Bureau of Mines, could be an important source of supply of oil and gas in the not too distant future.

Potash, sodium, and phosphate are three other vital mineral resources in the economy of our Nation. The greater demand for these vital minerals is reflected in the tripling of applications for phosphate and potash in the last year in an effort to discover new sources of supply of these minerals.

The minerals resources owned by the United States are subject to disposition, generally, under the provisions of the United States mining laws or the mineral leasing laws. The minerals which are subject to disposition under the mineral leasing laws are coal, phosphate, sodium, oil and gas, oil shale, potash, and (in Louisiana and New Mexico) sulfur. In most cases, other minerals are subject to disposition under the mining laws.

Oil and gas leases for public land not within a known geologic structure of a producing oil or gas field are issued noncompetitively, while, within such a producing structure, leases are obtained by competitive bidding at public auction.

The Mineral Leasing Act for Acquired Lands, August 7, 1947, authorizes permits and leases for the disposition of deposits of oil, gas, oil shale, coal, phosphate, sodium, and potassium in most lands acquired by the United States. Applications in this respect are filed in the Bureau's Washington Office.

Rights to mineral lands owned by the United States are initiated by prospecting and discovery, and by locating the lands by staking the corners and other appropriate procedures. The locator acquires possessory right to the minerals in the claim without the necessity of applying for a patent. Such possessory right, however, must be maintained by the performance of annual assessment work in order to prevent relocation by others. On the other hand, after having expended $500 on the claim, the owner of a valid mining claim may obtain a patent by filing an application with the appropriate land office and meeting the requirements of the law and regulations.

It is not an exaggeration to estimate that 90 percent of the functions of the Division of Minerals in the Washington office and in the field is closely related to our national defense programs. In addition, they are important factors in building the economy of our Nation through facilitating mineral development.

THE ROLE OF LAND OFFICES IN OIL DISCOVERIES

by JOSEPH C. CONRACE, *Regional Chief of Adjudication,* Region III

A 29-year search has recently resulted in oil discoveries in Williston Basin, an area of approximately 80,000 square miles bounded by western North Dakota, eastern Montana, northern South Dakota, and southern Saskatchewan.

An official of one of the major oil companies attending the recent annual convention of the Rocky Mountain Oil and Gas Association in Denver was reported as having remarked that the Williston Basin is currently one of the hottest oil territories in the Nation and that it contains a sufficient volume of sediments to make it one of the potentially great oil-producing areas of the world.

Only passage of time will reveal the extent of that prophetic statement. Irrespective of this, however, there has been feverish activity in the race to lease every available acre of land within the probable area of the "discovery circle." Over 35 million acres of Williston Basin lands in the United States and Canada have been leased by major oil companies, according to a report reprinted in the November 1951 issue of the Rocky Mountain Oil Reporter.

All types of ownership have been leased for oil and gas purposes; i. e., privately owned or deeded land, State-owned land, and land wherein the oil and gas deposits are owned by the United States.

With certain exceptions, such as in national parks, oil and gas deposits owned by the United States are subject to disposition under the provisions of the Mineral Leasing Act of 1920, as amended, the administrator of which is the Bureau of Land Management. Except for deposits within the known geologic structure of a producing oil or gas field (and therefore subject to appropriation only by competitive bidding at public sale), the right to acquire oil and gas deposits is initiated by filing offers to lease, under the noncompetitive provisions of the leasing act. Filing is made at the appropriate BLM land office.

The brisk filing of oil and gas lease offers by the public is generally in direct proportion to the

(Continued on page 12)

OIL EXPLORATION. This crew hunts for signs of new oil supplise on the Madden incline, 80 miles north of Lander, near the Owl Creek mountains of Wyoming. Although this is not the Williston Basin, the desolate topography is similar to that faced by oil men in North Dakota. Oil Industry Information Committee photo.

INTERNATIONAL COOPERATION

by **BYRON C. DENNY,** ***International Cooperation Officer***

Recent history has shown that the ultimate boundaries of the free world will depend in large part upon land policies. There are few countries which are not faced with major problems of land tenure and natural resource development.

Through improved transportation and the wide scope of World War II, people of different nationalities have been brought closer together as never before. Exploited people are learning better ways of life. Persons who had no hope of owning land or of obtaining equitable rights to resource use are insisting that aggressive steps be taken to eliminate conditions of peonage. They inherently want a secure right to land—one of the fundamental incentives to increased production and raised living standards.

Collective security of friendly countries and the development of their resources to our mutual interests is being repeatedly recognized by the Congress and the President in United States policy. On December 1, 1950, Secretary Oscar L. Chapman formally advised the heads of bureaus and Offices of the Department of the Interior that "The increasing responsibilities of the Department in resource conservation and development require that greater emphasis be placed on our activities in the field of foreign policy and programs, both in the Office of the Secretary and in bureaus and offices concerned."

One of the major reasons for placing greater emphasis upon foreign activities is the recognized value of technical know-how in international activities of the United States, the United Nations, and other organizations. To obtain some of the best technical experience available and to avoid duplication, new and important responsibilities are being placed upon established agencies and their experienced technical staffs in planning and backstopping technical assistance program operations.

The Bureau of Land Management has much to offer other countries from its extensive experience in guiding land settlement and in the management of grazing, forest, and mineral resources. Many countries encountering staggering social and econ-

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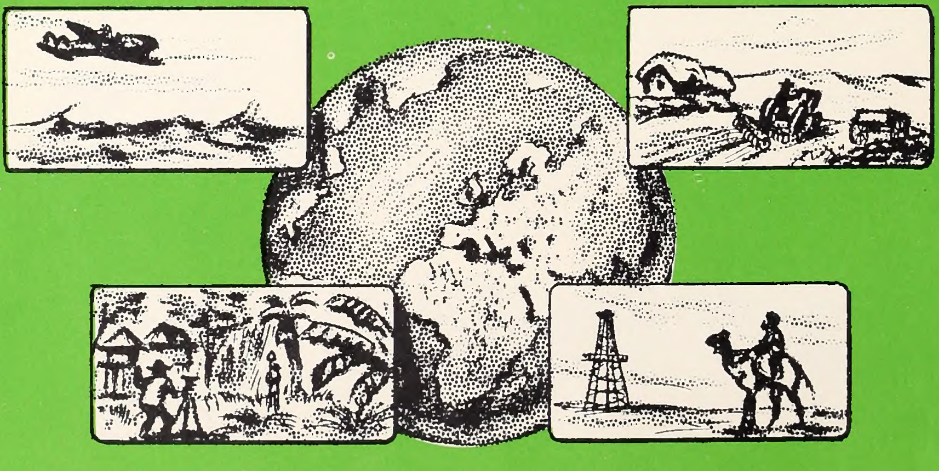

AMERICAN POTASH INDUSTRY

by HORACE M. ALBRIGHT, *President,* United States Potash Company

The Department of the Interior can be very proud of the American potash industry, which has been developed largely on public domain lands under the mineral-leasing system as administered by the Bureau of Land Management and the Geological Survey.

In this industry, cooperation between Government and private enterprise has successfully operated for more than 20 years. The Federal agencies have performed their functions of land administration, mining supervision, and royalty and rental collection and accounting while progressive corporations have opened, developed, and operated extensive mines and refineries without requiring 1 cent of Government funds or any form of subsidy.

The United States has been made independent of Old World potash production. This is a fact of highest importance, for, without a relative abundance of this essential mineral, industry would have been heavily handicapped in World War II, and agriculture could not have met the food and fiber needs of this and other countries, especially Canada.

In World War I, when Germany controlled the potash supply of the world, we were deprived of this vital mineral, and, despite the expenditure of vast sums of money by the United States Government and private business in opening 128 small plants, only small amounts of potash were produced, and at great cost. Prices were necessarily high, reaching about $500 a ton. Only one of these plants survived the postwar resumption of European potash importation, the one developed by the American Potash & Chemical Corp. at Searles Lake, Calif.

Determined never to be caught again without an adequate potash supply, the Interior Department in 1924 sought and obtained an appropriation for exploration of the public domain by intensive prospecting, including drilling of wells and careful core testing. This work, carried on by the Geological Survey and Bureau of Mines, was performed in accordance with the high standards of these bureaus, and potash was found, but it remained for private enterprise to discover a commercial body of potash ore. This occurred in southeastern New Mexico, between the Pecos River and the Llano Estacado, or Staked Plain, about 25 miles northeast of Carlsbad.

The Snowden & McSweeney Co. first encountered sylvite, the widely sought-for potash ore, while prospecting for oil in 1925. Its stockholders organized a new prospecting group, which invested large sums in continuing the search for a good commercial body of sylvite. This group formed the United States Potash Co., which today is the pioneer mining company in the field and one of the largest operators.

Under the law, upon discovery of a commercial body of ore, a permit holder or his assignee may obtain one or more potash leases. Acreage limitations of prospecting lands and leaseholds are by regulation of the Department of the Interior. Current regulations limit the acreage which one company can hold to 15,360 acres under lease, and 25,600 acres under prospecting permit.

There are now three large potash-mining operations in the New Mexico field. They are conducted by the United States Potash Co., Potash Co. of America, and International Minerals & Chemical Corp. Two new mines are being opened, one by the Southwest Potash Co., a subsidiary of American Metals Co., and the other by Duval Sulphur & Potash Co., a subsidiary of Electric Bond & Share Co. Investment of private enterprise in these mines and their associated refineries and other works is probably more than $40,000,000—which, of course, does not include the value of the ore reserves.

In addition to the New Mexico potash mines and refineries, which now produce about 85 percent of American potash—Western Hemisphere potash, as a matter of fact—mention must be made of the operations of American Potash & Chemical Corp. at Trona on Searles Lake, Calif., and of Bonneville, Ltd., near Wendover on the Utah-Nevada boundary line. Both of these companies extract potash from brine, though by different processes:

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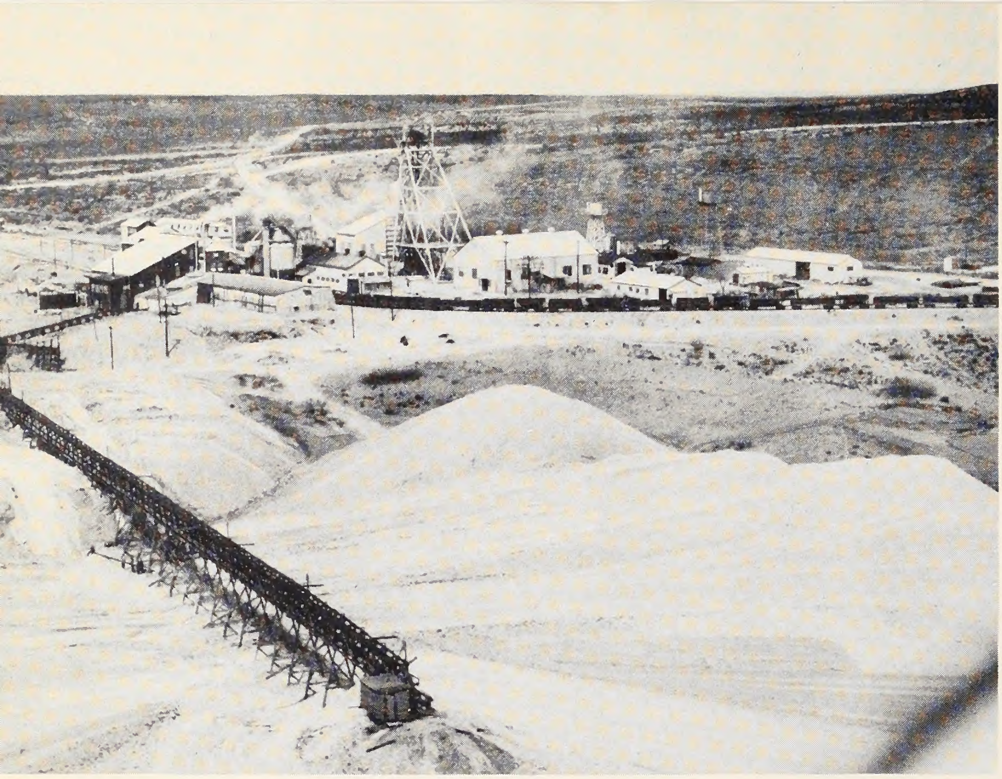


NEW OIL. The Sterling-Truesdale ver

MINE SITE. Potash for industry come
N. Mex. United States Potash Co. pho

Public Land Minerals

CONTRIBUTE TO THE NATION'S DEFENSE AND ECONOMIC SECURITY

Gold was the lure of many early explorers to the North American Continent. Strangely enough, however, it was not gold but iron, copper, and lead—found by settlers in 1585, 1632, and 1621, respectively—that contributed the most to the development of the Colonies that were to become the United States of America.

Development was slow at first, but with the Revolutionary War began the exploitation of the vast mineral reserves that contributed to the astounding productivity of America.

Minerals are essential in peace and in war. The relative abundance of mineral resources in America have directly contributed to our present high standard of living, and in every military crisis of our history the availability and wealth of the Nation's mineral supply have been major factors in determining the outcome of such struggle in favor of the United States. The role of minerals in our way of life cannot be easily overestimated.

Today, however, special problems face the Nation in the development and management of mineral reserves. Increased emphasis upon minerals and their use by industry and agriculture are but a phase of a greater problem. Unlike timber and agricultural crops, minerals cannot be managed on a sustained-yield basis. Minerals can be exploited but once—except in rare instances, and then by an uncertain, sometimes complicated process of salvage.

The conservation of oil, gas, iron, copper, phosphate and other mineral products of the earth cannot restore these materials but can only contribute to their wise use. Greater use of minerals, increasing demands upon our present supply, and the probable needs of the near future make it imperative that "conservation" in every sense be employed in minerals management.

Minerals from public lands are recognized as

near Los Angeles opened a new field.

GYPSUM. Gypsum to condition soil on California lands comes from public lands.

om public lands. This mine is in Carlsbad,

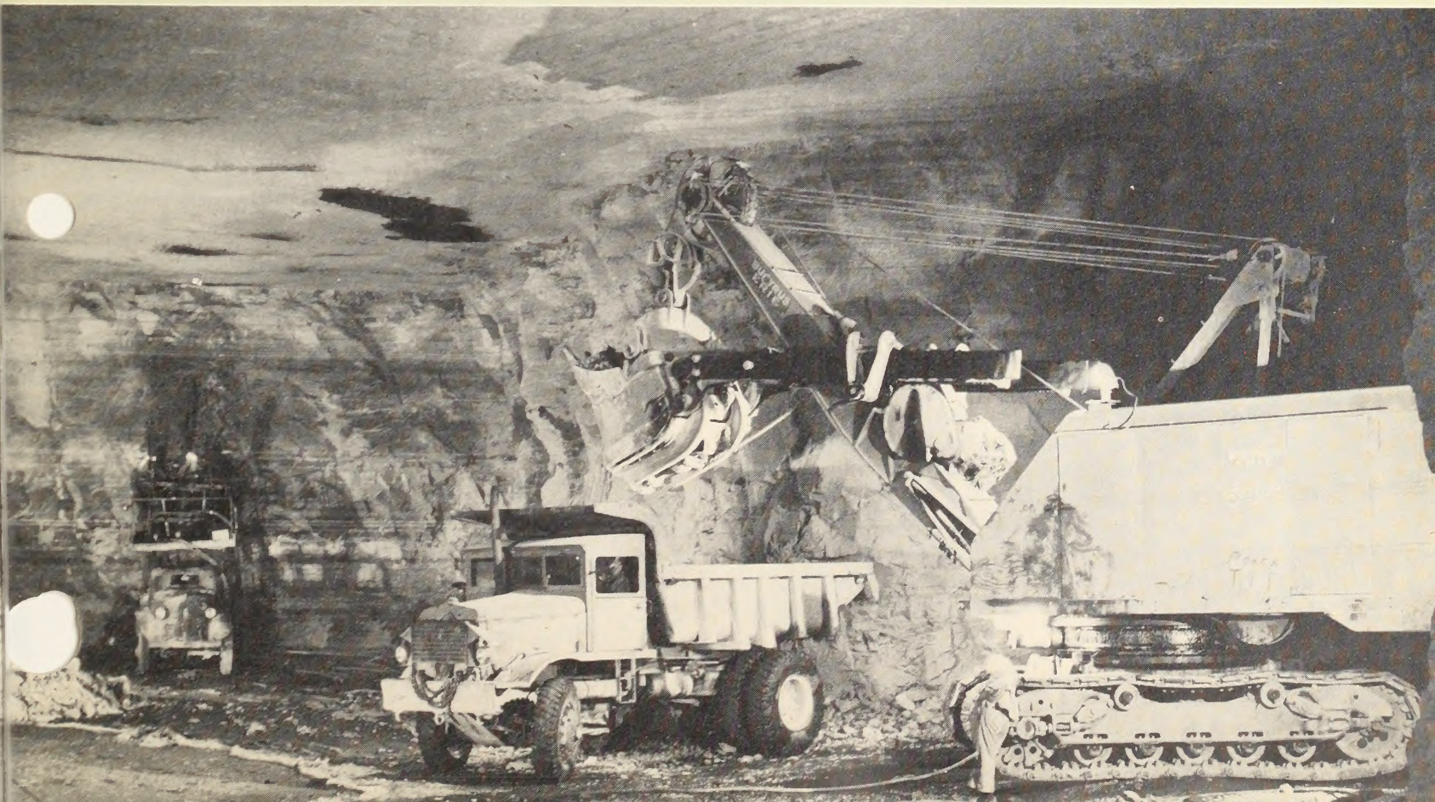
.

a major contribution to defense and security.

The Bureau of Land Management is responsible for the disposition of minerals on public domain and upon other lands under Federal ownership. Conservation, here, means conscientious administration of those laws providing for minerals, disposition under lease, permit, and sale . . . as well as the study of mineral development policy, institution of programs, and consideration of prospective legislation.

The Bureau of Land Management cooperates with two other Department of the Interior agencies in a minerals program for public lands—the Bureau of Mines and the Geological Survey.

OIL SHALE. Vast quantities of oil shale on public lands offer a rich new source of power. Bureau of Mines photo.



active acres

ACTIVITY MAP

As graphically shown by the map on page 15, public lands administered by the Bureau of Land Management in Arizona are of vital importance to that State's economy. Most of the public land—a total of over 13½ million acres—lie within four established grazing districts. Figures for fiscal year 1951 show that on these areas alone, nearly 68,000 head of cattle, 36,500 sheep and goats, 1,350 horses, and 6,000 big game animals received a large part of their annual forage requirement. In addition a total of 2,380,000 acres outside of grazing districts were leased to ranchers for grazing purposes.

To afford increased use of the range, BLM has reseeded 25,020 acres, built 2,156 miles of fence, constructed 102 reservoirs, developed 36 springs, dug 59 wells, constructed 587 miles of truck trails, and made many other improvements. The Bureau's soil and moisture conservation program included the construction of 254,782 cubic yards of dikes and levees, 2,150 linear feet of water-spreaders and a program for brush and weed control covering 72,160 acres.

A forest and woodland management program is another phase of the Bureau's activities in Arizona. While the volume of saw timber is relatively small it is important to a number of isolated rural communities for home and ranch structures. . . . 678,000 board feet brought $3,435 during the 1951 fiscal period. A still more important resource is the juniper and piñion woodland located on 1,475,000 acres of Arizona public lands. These woodlands are the source of large quantities of fence posts, poles, and fuel wood.

The most common types of applications for Federal lands in Arizona are for small tracts, nearly 2,000 such leases were in force at the end of fiscal year 1951. Other BLM activities in Arizona include the processing of applications for oil and gas leases, granting special land-use permits, and surveying and resurveying large areas of public lands.

AT RANDOM

The acquisition of small tracts of public land for home, cabin, camp, health, recreational, or business purposes is apparently one of the major interests of the average American citizen. The Bureau of Land Management, in its Washington and regional offices, receives upward of 100,000 requests a year for information on how to acquire a "remnant" of the public domain.

In spite of limitations on surveying and classification activities that would open large areas of public domain to application by citizens under the "five-acre tract law," certain areas are opened yearly in such places as Florida, Alabama, Wisconsin, southern California, Arizona, and Alaska. These areas, formally opened, are by law offered first to veterans of World War II, and usually a drawing takes place to determine allocation of the lots.

Individuals, however, who may or may not be veterans, may search out and locate small tracts of public domain which they feel sure can be properly classified as suitable for small-tract development and may file their application for such land. These requests are taken in order, and as the BLM land offices are able to take up the cases, the desired land is surveyed and classified and the application allowed or rejected.

An amazing new chemical, Krilium, may prove to be the answer to many public land problems if present claims by its manufacturer, the Monsanto Chemical Co., are susbtantiated. An artificial soil conditioner, Krilium comes in powdered form and may be worked into the soil, where it joins with collodial clay to form small aggregates that keep the soil loose and porous. Sprinkled wet or dry upon the surface of unworked land, it forms a film resistant to wind and rain erosion.

As a result of recent Bureau of Land Management-Monsanto conference, experimental studies have been proposed for small areas of Federal rangelands. About 2,000 pounds of the soil con- tioner will be used in test areas of approxi- tely 5 acres each. The Raft River Valley in daho and the Alzada water spreading areas in Montana have been suggested as possible experimental sites.

The Secretary of the Interior has ruled that bat guano is a mineral analogous to phosphate and that deposits of the valued fertilizer in caves on public lands may be leased through Bureau of Land Management land offices. Guano caves will have to be discovered by prospective lessees, however, since the Bureau is unable to tell would-be developers of this rich mineral where commercial deposits can be found.

Tree seeds gathered from forests and woodlands on public lands in Alaska are regularly shipped to Finland, Iceland, and Sweden for use in reforestation and experimental planting. Sweden, in particular, has been very successful, through tree-breeding experiments, in developing hardy, rapid-growing strains of forest trees. Trees from seed produced in the Interior of the Territory exhibit characteristics of hardiness and vigor which make them especially useful for both breeding and planting experiments in subpolar regions.

VISUAL AID

A new "visual aid" in the Bureau of Land Management's halogeton control program is a four-page leaflet, which, through pictures and brief captions, tells the story of how halogeton (an introduced poisonous weed) spreads across rangeland in the West. Shown also are control measures undertaken by the Bureau on public lands, the most important of which is range reseeding.

The pictorial leaflet is proving to be very successful as an educational medium to familiarize range users, conservationists, and others with the serious problem of halogeton.

FOR THE RECORD

Cash receipts of nearly 17½ million dollars will be distributed to 26 States and the Territory of Alaska as their share of 1951 fiscal-year proceeds from public lands administered by the Bureau of Land Management.

Distribution of the funds to States is made semiannually or annually as provided by law in lieu of taxes which might be levied by the States if Government-owned lands now under BLM jurisdiction were transferred to private ownership.

Operating on a total appropriation of $8,786,543, the Bureau collected revenues amounting to $49,082,331, or a ratio of nearly $6 in return to the Government for every dollar appropriated for BLM operations.

Wyoming will receive the largest amount under the State distribution schedule with $4,935,232, being "ear-marked" as its share of receipts from public land activities within its borders. California, with $3,251,162; Oregon, $3,240,006; New Mexico, $2,384,702; and Colorado, $1,919,624, also are in the million-dollar-plus class in the schedule of distribution.

BOOK SHELF

OUR LANDED HISTORY—THE PUBLIC DOMAIN, 1776–1936 by Roy M. Robbins, Princeton University Press, Princeton, N. J., 1942. Reprinted by Peter Smith Publisher, New York, N. Y., 1950. Covering a period known as America's formative or frontier era, this book illustrates the influence of public-land policy—one of liberal disposal—as a force in shaping the economy and society of this Nation. Divided into four parts, the 423-page book deals with land settlement and the settler, land history and the economic development it favored, early land legislation and its lax administration, and a new era of conservation from 1901–35.

PETROLEUM GEOLOGY, by Kenneth K. Landes, John Wiley & Sons, Inc., New York City, 1951. For knowledge on geological occurrences of oil and gas deposits, geographical distribution of oil and gas, and techniques for locating such deposits, this 660-page book is a good source. While technical, the writer explains his terms, supplies his own charts, and avoids the assumption that the reader already has a background in geology and related sciences. Simply stated, this text tells how oil and gas are trapped and how these traps may be discovered.

THE FORMATION OF MINERAL DEPOSITS, by Alan M. Bateman, John Wiley & Sons, Inc., New York City, 1951. Individuals who wish to become acquainted with basic facts about mineral deposits—how they occur, why they are there, how to find them—will be interested in this fundamental "textbook." While obviously authoritative and suitable for scientists, engineers, and industrialists, the book's greatest merit is its simple exposition and graphic presentation. BLM employees and other land managers who need more information on minerals will find that this book fills a gap in literature on this subject. Selected references for additional reading make it especially good.

ROLE OF LAND OFFICES

(Continued from page 5)

degree of interest or activity exhibited by oil cognoscenti in any particular area. In the event of a sudden or unlooked-for disclosure of an important oil discovery, a mad scramble ensues to examine public land status records for the purpose of locating unleased areas within the "probable circle" of the discovery zone. The filing of lease offers commences and continues in a steady stream until the well-known expression "doing a land office business" becomes reality. The limited personnel of the particular land office involved, is taxed to the utmost to keep abreast of the daily flood of lease offers. It was just such a situation as this which confronted the Federal land office at Billings, Mont., when dicovery occurred in the Williston Basin area early in 1951.

There was a rush of oil and gas filings. In April 1951 there were filed 344 separate lease offers for lands in Montana—more than 7 times the monthly average for the first 3 months of 1951. This was unprecedented in the history of the land office at Billings.

The number of oil and gas filings subsequent to news of the Williston Basin discovery soared from 144 to 3,839 for Montana and from 13 to 1,102 for North and South Dakota during the next 9 months.

The largest number of oil and gas lease offers filed any one month occurred in November 1951—with 859 offers for Montana lands and 250 offers for North or South Dakota lands, a combined total of 1,117 for that 1 month. This was almost three times the monthly average for the year.

The immediate effect of this unprecedented filing of oil and gas lease offers due to the Williston Basin discovery was to increase the backlog of unclosed cases at the Billings land office from 369 on April 1, 1951, to 3,402 on December 31, 1951—an increase of 3,033 new cases or 822 percent.

Under the circumstances these 3,402 unclosed cases presented a real challenge to the land office at Billings. The parties to the lease offers rightfully expect reasonably prompt action on the part of the land office in determining the merits of their respective lease offers. Furthermore, there is always the possibility that lack of prompt action may endanger the success of vital development plans by oil operators.

Such development programs may involve a combination of privately owned land, State-owned land, and land wherein oil and gas deposits are federally owned. It is vital to parties "blocking out" an area for development purposes to know the merits of lease offers covering federally owned oil and gas deposits within that particular area. Thus, unless the land office is able to take prompt action on lease offers, successful development may be hindered.

To meet this existing emergency, and in order to insure prompt action with respect to lease offers which are pending, procedures and routine have been readjusted to accommodate the emergency conditions, and every possible aid has been made available to the Billings office in its intensive efforts to reduce the backlog of unclosed cases as quickly as possible.

Federal land offices are heavy revenue producers. As a matter of record, the total receipts from the six States in Region III under the Mineral Leasing Act since its enactment in 1920 to the end of fiscal year on June 30, 1951, has amounted to $147,247,844. Of this amount, $135,272,917 was derived from Wyoming lands and $10,539,083 from Montana lands.

This figure of 10½ million dollars derived from federally owned minerals in Montana is for the 30-year period 1921–51 and averages about $350,000 a year. Following the Williston Basin discovery, however, the Billings land office collected $2,561,156 for Montana lands for the 9-month period from April 1 to December 31, 1951. This averages about $3,390,756 annually as compared to the approximately one-tenth of that sum averaged annually for the preceding 30 years.

All receipts derived from the disposition of minerals under the act of 1920, as amended, are covered into the Treasury and earmarked in the amount of 52½ percent for reclamation funds and 37½ percent for distribution to States and counties. Thus, the States of Montana and North and South Dakota are the potential recipients of substantial benefits through the disposition by the Bureau of Land Management of federally owned oil and gas deposits within the Williston Basin area.

AMERICAN POTASH INDUSTRY

ntinued from page 7)

the former by a fractional crystallization method, the latter by solar evaporation and flotation. Both hold potash-bearing lands and brines in fee, but also have Federal leases and are thus within the range of Interior's mineral leasing regulations and supervision.

The State of New Mexico, incidentally, owns lands in the Carlsbad field, and the operating companies hold leases on such lands. State supervision is closely coordinated with Geological Survey technical planning and inspection.

Mining of potash is carried on solely in New Mexico. The commercial ore bodies lie about 1,000 feet below the surface. Shafts are sunk and potash is extracted by the latest types of electrically operated machinery. Approximately one-half the ore has been taken on first mining. All development plans are submitted to the Mining Supervisor of the Geological Survey for approval. The Bureau of Mines is responsible for all mine safety inspections of mining operations.

The growth of the American potash industry has been of immense economic importance to New Mexico and the desert section of California where the mines and brine plants are located.

Federal, State, and local government units have benefited in annual tax payments, which are large. Income and other Federal taxes run into millions nd the Department of the Interior collects over million dollars a year in rentals and royalties—a large portion of which is returned directly to the State easing the tax burden on its citizens. In fiscal year 1950, the potash royalties alone totaled $1,371,576.02. This does not include State royalties from State-owned land being mined.

Production of potash in the United States, which in 1931, when the first New Mexico mine was opened, reached a total of 63,880 tons K_2O (potassium oxide) soared to 1,255,218 tons K_2O in 1950, and it is certain that in 1951 it was further increased. In 1952 it is expected that the two new mines in New Mexico will be in production and when that happens upward of 350,000 tons K_2O will be added to the American output, considerably more than is now imported from Europe, to fill the current gap between production and consumption of potash in the American market, which includes the United States, Cuba, and Canada.

There are some exports to other countries from the United States, but these are not great in comparison with tonnages used in the three countries just mentioned. Practically all chemical potash is produced in the United States.

Not only did the growth and expansion of the American potash industry make the United States and other North American countries independent of foreign sources of supply, but there has been reduction in prices through the years since the New Mexico deposits were discovered, years that have seen other chemicals and even fertilizers themselves advance in price from time to time, although not in most cases at the same rate or to the same height attained by many other commodities.

In 1939–40 the Departments of Commerce and Justice conducted a thorough inquiry into the economic and business practices of the potash industry. Results of these studies were embodied in a report by Dr. Willard Thorp, now Assistant Secretary of State, and Dr. E. A. Tupper, now with the Defense Production Authority. In the concluding section of their report, they had the following to say about the industry: ". . . it appears that the potash industry has demonstrated clearly those factors of pioneering development, technological advance and responsible management which represents the highest expression of American industry."

The potash industry is proud of its achievements, and undoubtedly the officials of the Department of the Interior who have been concerned with the development of the industry under the mineral leasing laws are finding ample grounds for gratification in having had a part in the development of an industry so important to our country.

INTERNATIONAL COOPERATION

(Continued from page 6)

omic problems centered in the land have undeveloped productive lands suitable for crop production, vast uncontrolled grazing areas which are misused by over or under grazing, forests which should be exploited on a sustained-yield basis, and mineral resources which the free world needs and which should be extracted in an orderly manner and in a way that will contribute to the economic development of each producing nation.

Public land policies of the United States are the outgrowth of problems which were encountered in the early stages of our development, when we were not always strong as a Nation. Countries are looking to us for assistance and some are attempting to adopt our policies without the benefit of the technical ability which is necessary to make them work under different stages of development.

While there are many short cuts to resource development, there are absolute minimum limits to which these can be made—as most land problems are fluctuating. These problems are extremely complicated, because in the final analysis they involve people. Any reasonably permanent solution ordinarily requires careful planning, a workable institutional framework, and a long period of time.

(Continued on next page)

While United States land policies are not ideal and often have lagged behind the needs of the moment, these policies, nevertheless, recognize the public interest of present and future generations, individual freedom, and the security of tenure of men and women who directly depend upon land and other resources for their livelihood.

Fundamental to United States land policies as exemplified in homesteading and mining claims is the principle that all persons, even with little capital, are given an equal opportunity through their own work and good faith, to acquire land of their own.

It was early recognized that the mere acquisition of land did not provide security to the owner or the incentive for using and improving the land. Land-ownership boundaries had to be definitely located on the ground and readily described through cadastral surveys; land-title record systems had to be established. Land classification was started to eliminate the possibility of persons acquiring land in uneconomic operating units and for purposes for which it is not suitable. Grazing and forestry management practices have been necessary to insure that resources are used in accordance with proved conservation practices on a sustained-yield basis.

Most countries are making intensive efforts to increase agricultural, mineral, and industrial developments—but this effort may be wasted unless more attention is given to less spectacular but more basic factors essential to stability.

The Bureau of Land Management's active participation in international work has been under way for only about a year and a half. Starting with Director Marion Clawson's lectures on Organization and Administration in the Formulation and Economic Appraisal of Development Projects at the Food and Agriculture Organization's Asiatic Training Center in Pakistan during the fall of 1950, personnel of the Bureau have been working in various parts of the world on technical land-management problems. This work is undertaken with the Technical Cooperation Administration of the Department of State, the Mutual Security Agency, and the Food and Agriculture Organization of the United Nations.

During this brief period nine employees of the Bureau have been or are on foreign assignments. Late in 1950, Earl G. Harrington, Chief of the Division of Cadastral Engineering, was the United States representative at the British Commonwealth-United States Surveyors' Conference at Wellington, New Zealand. As Chief of the Branch of Land Classification, I was a member of the United States delegation to the Fourth Inter-American Agricultural Conference in Montevideo, Uruguay, during which time several other Latin-American countries were visited in connection with preplanning technical assistance programs.

In 1951, Marvin Lytle, a cadastral engineer in the Bureau's office at Portland, Oreg., advis the German Federal Ministry of Agriculture Frankfort on surveying problems encountered in the consolidation of small fragmented land holdings into efficient operating units. Luther T. Hoffman, Regional Administrator at San Francisco, left for Paraguay to advise the Joint Paraguay-United States Commission on public land problems, especially on land settlement. Leonard Berlin, regional cadastral engineer for Alaska, is advising the Philippine ECA mission on surveying and other land management problems in the settlement and development of public lands. This past December, Regional Administrator Albin D. Molohon of Billings, Mont., lectured at the FAO Training Center at Ankara, Turkey, on Organization and Administration in Project Development.

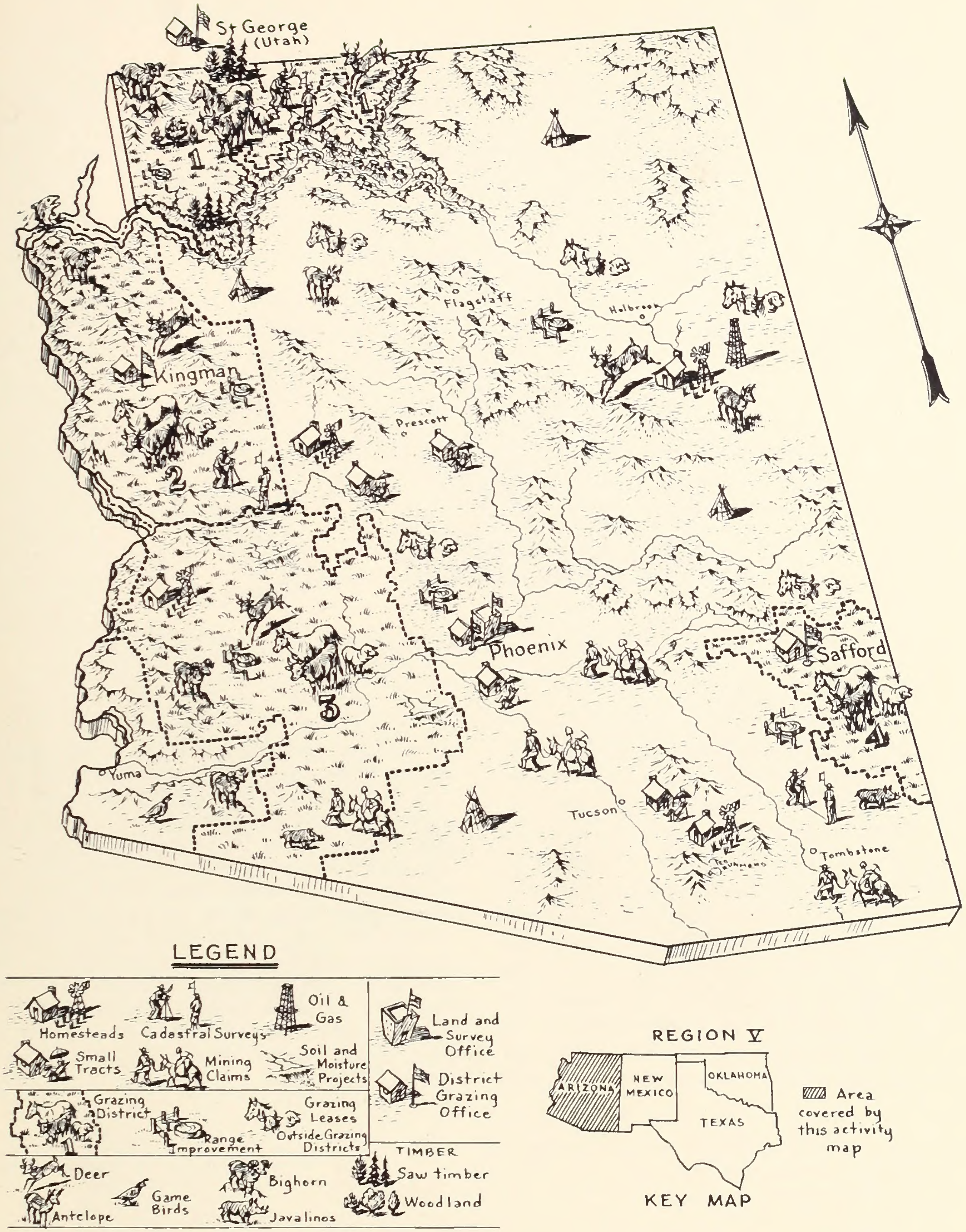
Harold T. Jorgenson, Regional Chief of Land Planning for Alaska, and Kenneth B. Platt, Agricultural Economist in the Bureau's Washington office, are leaving for Cairo to advise the Egyptian government on land management and tenure problems. Other BLM officials are also preparing to leave on projects for which the Bureau is technically responsible.

International activities of the Bureau of Land Management are undertaken in many ways. In addition to international conferences in other countries, the Bureau is usually represented at conferences dealing with land management problems held in the United States and on Departmental and interdepartmental committees. T complement Bureau specialists in other countries, a program for using Bureau facilities in training foreign nationals is getting underway. Leaders of other countries are more frequent visitors to BLM offices. These men are emphasizing the immediate need of tackling land management problems, which they are finding to be among the most difficult their countries encounter.

The success of the foreign work depends to a large extent upon responsible well-qualified specialists and technical backstopping by the entire Bureau. Through these activities new methods of improving the quality of our work at home will be obtained, because our policies and procedures are now as never before being put to the test of critical analysis by technicians throughout the world. Through their work with officials of other lands BLM technicians are obtaining a broader perspective and many new ideas.

A start has been made in the exchange of grass seeds adapted to arid and semiarid range livestock areas between Libya and the United States. The interchange of technical and semitechnical publications between the Bureau and its counterparts in other countries is increasing. From the preplanning and operations work in progress, these and other contacts with people throughout the world are a welcome improvement over what once actually amounted to isolation of knowledge.

ARIZONA LAND-USE AND ACTIVITY MAP



For comments on this map, please see page 10

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IT'S THE LAND LAW

Who did you say has the right-of-way?

The case of Mrs. Skunk and family is not likely to be one of those things anyone would want to take into court. Nor is their "right-of-way" likely to be challenged by the power line construction crew. Skunks have special privileges by natural law.

With its responsibility of administering the public lands of the United States, BLM, through laws enacted by Congress, has the authority to grant rights-of-way. A right-of-way may be granted by a license, permit, or easement. Thousands of applications for rights-of-way are received by the Bureau of Land Management for such purposes as the construction of roads, transmission and power lines, telephone, telegraph and pipe lines, canals, ditches, reservoirs, and flight strips.

Modern technology sometimes results in the Bureau of Land Management being called upon to issue rights-of-way for projects of a type not existing when a law was passed, but which the law may be construed to cover. One such example is the recent permission given to use public lands for microwave relay tower sites. A string of such towers crosses the continent, providing a link for telephone and television systems, thus making possible transcontinental telecasts. BLM held that microwave towers constitute electrical plants for telephone and telegraph purposes under a 1901 act of Congress.

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